

ABSTRACT OF THE DISCLOSURE

A system and method for designing an integrated relaxation oscillator that exhibits reduced change in the frequency of oscillation caused by process variation. Improved sensitivity to component variation due to process shift is achieved through
5 using more than one structure type when implementing the resistors affecting the RC time constant and threshold (trip point) voltages of the oscillator. Structure types are related to the fabrication process and for a CMOS process include, but are not limited to n-diffusion, p-diffusion, n-well, p-well, pinched n-well, pinched p-well, poly-silicon and metal. Each structure type exhibits statistically independent process variations, allowing
10 for application of Lyapunov's extension of the Central Limit Theorem for statistically uncorrelated events to desensitize the effect from different possible causes. Thus, improvement in the performance of the oscillator may be achieved with a reduced trim requirement and without using external precision resistors.